AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of treating a subject suffering from pain comprising the step of administering to the subject an effective amount of a lactoferrin composition to provide an improvement in pain in the subject, wherein the pain is associated with ~~cancer or~~ surgery.

2. (Canceled)

3. (Original) The method of claim 1 wherein said lactoferrin composition reduces the severity of the patient's pain.

4. (Original) The method of claim 1, wherein said lactoferrin composition is dispersed in a pharmaceutically acceptable carrier.

5. (Original) The method of claim 1, wherein said lactoferrin is mammalian lactoferrin.

6. (Currently amended) The method of claim 5, wherein said lactoferrin is human lactoferrin or bovine lactoferrin.

7. (Original) The method of claim 1, wherein said lactoferrin is recombinant lactoferrin.

8. (Currently amended) ~~The method of claim 1~~ A method of treating a subject suffering from pain comprising the step of administering to the subject an effective amount of a lactoferrin composition to provide an improvement in pain in the subject, wherein the pain is associated with cancer or surgery, wherein said lactoferrin composition comprises an N-terminal lactoferrin variant.

9. (Original) The method of claim 8, wherein the N-terminal lactoferrin variant lacks at least the N-terminal glycine residue.

10. (Previously Presented) The method of claim 9, wherein said N-terminal lactoferrin variant comprises at least 1% to at least 50% w/w of the lactoferrin composition.

11. (Original) The method of claim 1, wherein said lactoferrin is administered orally.

12. (Original) The method of claim 1, wherein said lactoferrin is administered parenterally.

13. (Original) The method of claim 1, wherein said lactoferrin is administered topically.

14. (Original) The method of claim 11 further comprising administering an antacid in conjunction with said lactoferrin composition.

15. (Original) The method of claim 11 further comprising administering the lactoferrin in a delayed release formulation.

16. (Original) The method of claim 15, wherein the lactoferrin release occurs in the small intestine.

17. (Original) The method of claim 15, wherein the lactoferrin release occurs in the large intestine.

18. (Original) The method of claim 1, wherein the amount of the composition that is administered is about 1 ng to about 100 g per day.

19. (Original) The method of claim 1, wherein the amount of the composition that is administered is about 0.1 g to about 10 g per day.

20. (Original) The method of claim 1, wherein said lactoferrin composition reduces the production or activity of pro-inflammatory cytokines.

21. (Previously Presented) The method of claim 1, wherein said lactoferrin composition enhances the production or activity of cytokines that enhance an immune response.

22. (Previously Presented) The method of claim 20, wherein the cytokine is TNF-α.

1. Claims 23-34 (canceled)

35. (Previously Presented) A method of treating a subject suffering from pain comprising the step of administering to the subject an effective amount of a lactoferrin composition consisting essentially of an N-terminal variant to provide an improvement in pain in the subject, wherein the pain is associated with cancer, disorders of the central nervous system or surgery.

36. (Previously Presented) The method of claim 35, wherein the N-terminal variant lacks at least the N-terminal glycine residue.

37. (Previously Presented) The method of claim 36, wherein the N-terminal variant comprises at least 1% to at least 50% w/w of the lactoferrin composition.

38. (Previously Presented) A method of treating a subject suffering from pain comprising the step of administering to the subject an effective amount of a lactoferrin composition to provide an improvement in pain in the subject within 60 minutes of administration, wherein the pain is associated with cancer or surgery.

39. (New) The method of claim 38 wherein said lactoferrin composition reduces the severity of the patient's pain.

40. (New) The method of claim 38, wherein said lactoferrin composition is dispersed in a pharmaceutically acceptable carrier.

41. (New) The method of claim 38, wherein said lactoferrin is mammalian lactoferrin.

42. (New) The method of claim 41, wherein said lactoferrin is human lactoferrin or bovine lactoferrin.

43. (New) The method of claim 38, wherein said lactoferrin is recombinant lactoferrin.

44. (New) The method of claim 38, wherein said lactoferrin composition comprises an N-terminal lactoferrin variant.

45. (New) The method of claim 44, wherein the N-terminal lactoferrin variant lacks at least the N-terminal glycine residue.

46. (New) The method of claim 44, wherein said N-terminal lactoferrin variant comprises at least 1% to at least 50% w/w of the lactoferrin composition.

47. (New) The method of claim 38, wherein said lactoferrin is administered orally.

48. (New) The method of claim 47 further comprising administering an antacid in conjunction with said lactoferrin composition.

49. (New) The method of claim 47 further comprising administering the lactoferrin in a delayed release formulation.

50. (New) The method of claim 49, wherein the lactoferrin release occurs in the small intestine.

51. (New) The method of claim 49, wherein the lactoferrin release occurs in the large intestine.

52. (New) The method of claim 38, wherein the amount of the lactoferrin and/or N-terminal lactoferrin variant in the composition that is administered is about 1 ng to about 100 g per day.

53. (New) The method of claim 38, wherein the amount of the lactoferrin and/or N-terminal lactoferrin variant in the composition that is administered is about 0.1 g to about 10 g per day.